



GODDARD SPACE FLIGHT CENTER

A large, stylized red letter 'A' is the central graphic. A yellow elliptical orbit line loops around the middle of the 'A'. Scattered around the 'A' and orbit are numerous small, light blue star-like shapes.

PROFILE BOOK

**University Programs Office, Mail Code 603.1
NASA Goddard Space Flight Center
Greenbelt, MD 20771
<http://academy.gsfc.nasa.gov/2003/>**

**2003 NASA ACADEMY AT THE
GODDARD SPACE FLIGHT CENTER**

PROFILE BOOK

**University Programs Office, Mail Code 603.1
NASA Goddard Space Flight Center
Greenbelt, MD 20771
<http://academy.gsfc.nasa.gov/2003/>**



Sean O'Keefe, NASA Administrator

"This is NASA's vision for the future. Our mandate is:

- To improve life here,
- To extend life to there,
- To find life beyond

So, how do we get to that impressive picture of the future?

Part of the answer is by executing NASA's mission:

- *To understand and protect our home planet*
- *To explore the Universe and search for life*
- *To inspire the next generation of explorers
... as only NASA can."*

(From the Address by the Honorable Sean O'Keefe, NASA Administrator, at the Maxwell School of Citizenship and Public Affairs, Syracuse University, New York, April 12, 2002)



Table of Contents

Program Description	1
Eligibility, Selection Criteria, and Placement	1
A Brief History of the NASA Academy	3

Research Associates:

Meghan B. Baker	5
Brett Bethke	7
George Boyarko	9
Guillaume Collange	11
La Vida Cooper	13
Erik Dambach	15
Sally House	17
Joni Jorgensen	19
Kelly Kolb	21
Seth Koterba	23
Jeffrey Kujawa	25
Kevin Langone	27
Christina Pelzer	29
Darin Ragozzine	31
Miguel Román	33
Alyssa Rzeszutko	35
Julia Sakamoto	37
David Thompson	39

Staff:

Program Director	41
Program Co-Director	41
Program Co-Director	41
Program Manager	42
Dean of Academic Affairs	42
Logistics Manager	43
Operations Manager	43
Program Support	43
Program and IT Support	43
Special Assistants for Operations	44
Academy Alumni Coordinator	44

Links	45
--------------------	-----------



Program Description

The NASA Academy is an intensive resident summer program of higher learning for college undergraduate and graduate students interested in pursuing professional and leadership careers in space-related fields.

The NASA Academy program is designed to present a comprehensive package of information and experiences about the organization of the NASA Agency, some of its most important current and planned science, engineering, education, and technology enterprises, as well as a number of non-technical areas of critical significance, such as management, budgeting, safety, personnel and career development, leadership, space law, international cooperation, etc. Besides attending lectures and workshops, you will be involved in supervised research in GSFC laboratories, and will participate in visits to NASA Headquarters, other NASA Centers and facilities, the Applied Physics Laboratory, and a number of space-related academic laboratories and industries.



Eligibility, Selection Criteria, and Placement

The 18 participants in the 2003 NASA Goddard Academy have been selected from a pool of 65 financially supported applicants representing 29 states in the continental USA, Puerto Rico, Canada, and France. For the territorial USA, citizenship or permanent residence was required. Selection was based following criteria:

- academic rank (junior, senior, first, or second year graduate)
- academic performance (GPA higher than 3.0 or equivalent)
- demonstrated interest in the space program
- demonstrated leadership qualities
- research and/or project interest and experience
- maturity
- recommendation and references

Both the selection process and placement of the Academy participants in Goddard's research groups were assisted by recommendations from faculty, administrators, academic supervisors, and co-workers, and the applicants' self-profiling essays.



A Brief History of the NASA Academy

The NASA Academy was founded in 1993 (as the "NASA Space Academy") at the Goddard Space Flight Center by Gerald (Jerry) Soffen, former Mars Viking project scientist, architect of the NASA Astrobiology program, and first Director of the Goddard Office of University Programs. Jerry was an

accomplished scientist and a dedicated educator. He took advantage of the unusual opportunities presented to him during his career and realized the importance of mentoring in the life of young professionals. In his vision, the Academy was intended to exceed in purpose and content all the other regular internships by familiarizing its participants with as many facets of the NASA agency as possible. With his dynamic personality and unique leadership, he opened many gateways and defined a new standard of excellence.

"To give possible 'leaders' a view into how NASA, the university community, and the private sector function, set their priorities, and contribute to the success of the aerospace program."

*Gerald Soffen, Founder
(1926-2000)*

As the reputation of the Goddard Academy widened, new NASA Academy Programs were started at the Marshall Space Flight Center (1994), the Ames Research Center (1997), and the Dryden Flight Research Center (1997). In recent years, the Goddard and Ames Academies have functioned regularly.

The name of the program changed from "NASA Space Academy" to "NASA Academy" at specific NASA Centers. A continuous effort is being made to establish or re-establish Academies at various NASA Centers, with different profiles and focus areas.

Jerry Soffen died on November 22, 2000. We honor his legacy by continuing the Academy program that he loved so well.

In 2002, the NASA Academy celebrated ten years of successful activity. So far, 365 participants have graduated from the program.

In 1996, a German engineering student from the Imperial College in London, England, attended the Goddard Academy, as did an Italian student from La Sapienza in Rome, Italy, in 1999. In 2002, an alumnus of the International Space University (ISU) joined the Goddard Academy staff. This year, as part of a pilot international program, a French student will attend the Goddard Academy, and ISU will contribute both a staff member and a lecturer.



Meghan B. Baker

University of Maryland

College Park, Maryland
Aerospace Engineering
Bachelor of Science, May 2003



NASA Academy Research Project:

Effects of Aging on Films Used for Blanket
Materials

Principal Investigator: Michael Viens, Code 541

E-mail:

MeghanBri@comcast.net

Present Address:

8451 Oak Bush Terrace
Columbia, MD 21045

Permanent Address:

8451 Oak Bush Terrace
Columbia, MD 21045

Academic Experience

- *University of Maryland, College Park, MD, 1999 - Present*

Work Experience

- *University of Maryland Space Systems Laboratory, Research Assistant - College Park, MD, Jun 2000 - present*
Work at Neutral Buoyancy Research Facility on current projects, testing, machining, and analyzing data.
- *University of Maryland Department of Resident Life, Resident Assistant - College Park, MD, Aug 2001 - May 2003*
- *NASA Goddard Space Flight Center, Research Assistant - Greenbelt, MD, May 2001 - Aug 2001*
Work in clean room and semi-clean room on IRMOS.

Skills

- Computer Skills: Word Processing, spreadsheets, Internet, Microsoft PowerPoint, Matlab, Labview, some C
- Other Skills: SCUBA certified

Honors

- Tau Beta Pi
- Golden Key International Honor Society
- National Society of Collegiate Scholars
- Aerospace Honors Program
- University of Maryland College Park Scholars Program
- Academic Honors: Spring 2000, Fall 2000, Spring 2002
- Dean's List: Spring 2000, Fall 2000, Spring 2002

- Congressional Award of Service at the Bronze Level
- Dean's Scholarship to the University of Maryland
- Science and Technology Scholarship
- University of Maryland Aerospace Engineering Scholarship
- Girl Scout Gold Award

Activities

- American Institute of Aeronautics and Astronautics
- Society of Women Engineers
- Sigma Gamma Tau
- Maryland Student Legislature
- Soccer Coach for College Park Boys and Girls Club
- American Society of Mechanical Engineers

Hobbies and Interests

Girl Scouts, field hockey, lacrosse, swimming, music

"I have a very supportive family and group of friends. Without them, I am sure that I would not have made it this far, and that I would not be able to achieve what I plan to in the future. I have always wanted to be an astronaut and I have always wanted to work for NASA. I am glad that NASA Academy is an integral part of my path to success and I am excited about the experience!"



Brett Bethke

Massachusetts Institute of Technology

Cambridge, Massachusetts
Aerospace Engineering and Physics
Bachelor of Science, May 2005



NASA Academy Research Project:

Flux Transformers for Magnetic Calorimeter X-ray
Detector Arrays

Principal Investigator: Dr. Thomas Stevenson,
Code 553

E-mail:

bbethke@mit.edu

Present Address:

58 Manchester Rd.
Brookline, MA 02446

Permanent Address:

7020 Bridgeman Rd.
DeForest, WI 53532

Academic Experience

- *Massachusetts Institute of Technology, Cambridge, Massachusetts, 2001 - Present*

Work Experience

- *Kraft Foods, Inc. System Analyst - Summer 2001, Summer 2002*
Worked in a team-based environment developing a web application used to manage inventory, orders, and shipments in Kraft's warehouses across the country. Coding was done in Java using IBM's VisualAge for Java development environment.
- *Kennedy Space Center, Operational Internship - Jan 2003*
- *MarsGravity Biosatellite Project, Information Systems Team - 2003*
- *Taught high school Advanced Placement Physics - 2001*

Skills

- Computer Skills: C, C++, Java, JavaScript, Perl, x86 Assembly, HTML, JSP, SQL, Unix, Linux, Windows, Mathematica, Matlab

Honors

- National Merit Scholar
- Elks National Foundation Scholarship
- Lucent Global Science Scholars Finalist
- Advanced Placement (AP) Scholar with Distinction
- Robert C. Byrd Scholarship

Activities

- Habitat for Humanity (1998 - 2002)
- Freshman orientation leader (Aug 2002)
- MIT Discover Mechanical Engineering (Jan 2002)
- Aviation Challenge Summer Camp (1999)
- MIT Concert Choir
- MIT Lightweight Crew
- American Institute of Aeronautics and Astronautics
- Zeta Beta Tau fraternity academic chair

Hobbies and Interests

Running, hockey, soccer, biking, downhill skiing, rowing, rock climbing, outdoors/camping, reading, computers, network security, music, radio-controlled airplanes, model rockets, community service, intramural soccer, ice hockey, football, basketball, volleyball, badminton, squash, ultimate Frisbee, water polo

"Ever since I can remember, I have been fascinated with aerospace. When I was in second grade, I knew that I wanted to be an astronaut, and I still have that goal today. I think that the world is a fascinating place, and I love learning about how it works. I am generally interested in too many things at once to have time to pursue them all, but I try to make the most of things by keeping myself busy with lots of fun and interesting activities. I enjoy all kinds of sports as well as camping and the outdoors. I am very lucky to have a wonderful family, and I love spending time with them when I have the chance. I am very excited about the space program and look forward to contributing to it in any way that I can."



Case Western Reserve University

Cleveland, Ohio

Mechanical and Aerospace Engineering

Master of Science, May 2004

NASA Academy Research Project:

Investigating Potential Materials for Use in Thermal

Interfaces on the Hubble Space Telescope

Principal Investigator: Ben Reed, Code 541



E-mail:

gab16@po.cwru.edu

Present Address:

2107 Renrock Rd.
Cleveland, OH 44118

Permanent Address:

3025 Denver Dr.
Poland, OH 44514

Academic Experience

- *Case Western Reserve University, Cleveland, OH, 2002 - Present*
- *Bachelor of Science, University of Cincinnati, Cincinnati, OH, 2001*

Work Experience

- *Case Western Reserve University, Combustion Diagnostics Laboratory, NASA Glenn Research Center, On-Board Propulsion Branch, Graduate Student, Research Assistant - Cleveland, OH, Aug 2002 - Present*
Modify existing combustion models and run numerical simulations of premixed flames to determine the fuel rich flammability limit at reduced pressures. Perform experiments in high altitude combustion test cell at NASA Glenn. Investigate catalyzed micro-combustors for applications in micro-propulsion.
- *Dow Chemical Company, Manufacturing Engineer - Freeport, TX, Jul 2001 - Aug 2002*
Responsible for overall performance of epichlorohydrin production unit. Lead Root Cause Investigations and Process Improvement Teams.
- *Dow Corning Corporation, Chemical Engineer Co-op - Michigan/Kentucky, Alternating Quarters Winter 1996 - Summer 2000*
Implemented Design of Experimentation to test silicone matrices and improve adhesion to thermoplastics. Performed energy and design calculations and presented proposal for siloxane splitters upgrade.

Skills

- Computer Skills: Design Experimentation, Microsoft Office, Mathematica, LabView, CHEMKIN, Premix, CEA, PI System, Winsmith Weibul, Visual Basic, Engineer's Aide, Design Aid, VisSim, FORTRAN and PC Spartan

Honors

- Case Prime Fellowship
- Timken Engineering Honor Fellowship
- Tau Beta Pi Engineering Honor Society Member
- National Chemical Engineering Honor Society Member
- University of Cincinnati Herman Schneider Medal in Chemical Engineering
- Eight-time recognition to Engineering Dean's List
- Joseph B. Strauss scholarship

Activities

- AIAA
- AIChE
- Sigma Alpha Epsilon

Hobbies and Interests

Cycling (especially 60-100 mile rides), martial arts (Jeet Kune Do & Brazilian Jiu-Jitsu), softball, basketball, weight lifting; I am also an avid college football, basketball (GO BEARCATS!), and baseball fan.

"Since I was young, science and math have been some of my greatest interests. I believe many of the problems we face on earth can only be solved by research done outside of its influence; hence, these topics are integral to the advancement of the human race. I originally had an appointment to the Air Force Academy but could not attend for medical reasons, so I decided on majoring in Chemical Engineering at the University of Cincinnati. Wanting to pursue my lifelong dream of contributing to my country and developing new technologies, I made the choice to resign from a position in bulk chemical manufacturing to pursue an advanced degree in engineering. I am currently using my undergraduate degree in Chemical Engineering as a platform to cross over into Mechanical and Aerospace research."



**Ecole Nationale Supérieure de
l'Aéronautique et de l'Espace
(SUPAERO)**

Toulouse, France

Aeronautical and Space Engineering

Master of Science, October 2004



NASA Academy Research Project:

Formation Flying Mission Design and Analysis

Principal Investigator: Jesse A Leitner, Code 591.0

E-mail:

[guillaume.collange@
supaero.fr](mailto:guillaume.collange@supaero.fr)

Present Address:

10, Rue Gabriel Péri
31000 Toulouse, France

Permanent Address:

7, Route de Saint-Bonnet
63117 Chauriat, France

Academic Experience

- *Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (SUPAERO), Toulouse, France, 2001 - Present*
- *Lycée d'enseignement général et technologique La Fayette, Clermont-Ferrand, France, 1999 - 2001*
Spécial preparation in Maths and Physics

Work Experience

- *Pic du Midi Observatory - IMCCE (Celestial Mechanics Institute in Paris), Jun 2002*
Carried out research on the rotation speed of Ikeya-Zhang comet around its own axis. Developed an IDL program to find the period of rotation
- *SUPAERO and CNES (Centre National d'Etudes Spatiales - French Space Agency), 2002*
Managed a team and designed a Web site for Stentor: a CNES satellite and gave a lecture on Stentor and telecommunication satellites in French Guyana (South America) <http://www.supaero.fr/espace/stentor>
- *AIA (Atelier Industriel de l'Aéronautique - Aeronautics Industrial Workshop), 2002*
Training period as a mechanics apprentice, Mirage 2000 (Interceptor) and AlphaJet (training plane) maintenance

Skills

- Computer skills: C, C++, Java, Pascal, Delphi, IDL, Assembly Language, BASIC, Matlab, Flash, Dreamweaver, HTML, Adobe Premiere and Photoshop, Microsoft Office
- Language Skills: French, fluent in English, reasonable knowledge of Spanish, basic working knowledge of Japanese

Honors

- Baccalaureat (French equivalent of high school diploma) with distinction (1999)
- Region winner of a National Math contest (49th out of 100000) (1996)
- Region winner of a National Math contest (80th out of 130000) (1994)
- Congratulations for many trimesters in high school

Activities

- Supaero Association for Space (Club Espace), President (2002 - 2003)
- Supaero Television News, President (2002 - 2003)
- Amis de la Cité de l'Espace, Member (2003)
- American Field Service (AFS), Volunteer and Member (1998 - 2001)

Hobbies and Interests

Working on private pilots' license, snowboarding, scuba, Karate, swimming, soccer, movies

"As far as I remember, in my childhood, I wanted to be an astronaut or more precisely, a 'spationaut', that was a new word for European astronaut. At the time, none of my friends knew this word and I had to explain to them what it was. When I was ten, I learnt that I had a slight color-blindness and I would never be a 'spationaut'. But my passion did not fade away and, on the contrary, became more and more concrete as I discovered sciences like physics, mechanics, and astronomy and learned how they can be used in space. Now, I am fortunate to have the opportunity to approach the space industry with Supaero. Last year, I visited the space center in French Guyana and saw Arianespace rockets. I was astonished; the little child who was still in me had just made one of his dreams come true."

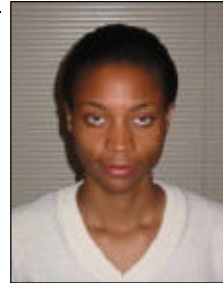


**Johns Hopkins
University**

Baltimore, Maryland
Electrical Engineering
Bachelor of Science,
May 2003

**College of Notre
Dame of Maryland**

Baltimore, Maryland
Physics
Bachelor of Arts,
May 2003



NASA Academy Research Project:

Hyperspectral Sensor for Image-Based Wavefront
Sensing

Principal Investigator: Bruce Dean, Code 551

Co-Investigator: Lee Feinberg, Code 443

E-mail:

lavidacooper@jhu.edu

Present Address:

110 West 39th St.
Apt 1806
Baltimore, MD 21210

Permanent Address:

2420 Olson St.
Temple Hills, MD
20748

Academic Experience

- *Johns Hopkins University, Baltimore, MD, 2002 - Present*
- *College of Notre Dame of Maryland, Baltimore, MD, 1998 - 2003*

Work Experience

- *Johns Hopkins University Sensory Communication and Microsystems Laboratory of Andreas G. Andreou, Senior Undergraduate Researcher - Baltimore, MD, Sep 2002 - Present*
(1) Wireless Data Transmission for Detection and Localization. (2) VLSI Circuit Characterization focusing on multiple-input translinear element networks using floating-gate metal insulated metal SOS transistors.
- *The Whiting-Turner Contracting Company, Electrical Engineering Intern - Jun 2001 - Feb 2002*
Electrical plan, quality control reviews of electrical systems, fire/life safety reviews of fire alarm systems.
- *Prince George's County Maryland Government, Electrical Engineering Intern - 1998 - 2000*
Performed (construction) site inspections with the Chief Electrical Inspector. Reviewed electrical plans.

Skills

- Computer Skills: Java, MatLab, AutoCAD, PSpice, MPLAB IDE - Assembly Language, FORTRAN, C, C++, Linux environment

Honors

- National Collegiate Minority Leadership Award (1999, 2000)
- Physics/Math Departmental Award (2000 - 2001)
- Who's Who Among American Colleges and Universities (2000/2001, 2001/2002)

Activities

- Student Development Committee of the Board of Trustees (2001 - 2002)
- Kappa Mu Epsilon (National Mathematics Honor Society), President (2000 - 2001, 2001 - 2002)
- Hypatian Society (Physics/Math/Computer Science Society), President (2000 - 2001, 2001 - 2002)
- Black Student Association, President (2000 - 2001, 2001 - 2002)
- Campus Ministries Advisory Board
- American Physical Society
- Calculus and Physics Tutoring

Hobbies and Interests

Classical trombone, bellydancing, traveling, cooking

"From an early age, I was curious and inquisitive, which later developed into an interest for problem-solving, the sciences, and mathematics. I developed my skills for the performing arts in high school; however, I continued to grow scientifically, seeking higher education in the areas of science and engineering. My thirst for knowledge led me to complete a dual degree program in Physics and Electrical Engineering from the College of Notre Dame and Johns Hopkins University. As a result, I have taken advantage of these opportunities by attending courses dealing with cutting-edge microtechnologies, and further applying these engineering skills in conducting research. College has allotted me the chance to hone my leadership skills in the form of numerous executive board appointments, as well as allowing me to mature both academically and mentally through an encouraging and nurturing environment."



Dartmouth College

Hanover, New Hampshire
Engineering Sciences
Bachelor of Arts, June 2004



NASA Academy Research Project:

Spacecraft Orbital Debris Modeling
Principal Investigator: Scott Hull, Code 591

E-mail:

[Erik.M.Dambach@
Dartmouth.edu](mailto:Erik.M.Dambach@Dartmouth.edu)

Present Address:

Hinman Box 784
Hanover, NH 03755

Permanent Address:

1 Buck Haven Trail
Stockholm, NJ 07460

Academic Experience

- *Dartmouth College, Hanover NH, 2000 - Present*

Work Experience

- *Dartmouth Physics and Astronomy Department, Research Assistant - Hanover, NH, Summer 2000*
Results presented as a poster paper by Professor Brian Chaboyer at American Astronomical Society meeting in January 2003.
- *Dartmouth, Teacher's Assistant - Hanover, NH, 2002 - 2003*
Introduction to Thermodynamics course. Responsibilities included assisting students with their weekly problem sets and grading problem sets and exams.

Skills

- Computer Skills: C++, Java, MATLAB, UNIX-based program, IRAF
- Language Skills: Spanish
- Other Skills: Red Cross-Certified Water Safety Instructor, Red Cross-Certified Lifeguard, Red Cross-Certified in CPR for the Professional Rescuer

Honors

- College Third Honor Group (2002)
- National Dean's List (2002)
- National Society of Collegiate Scholars
- Citibank Scholarship

Activities

- Member of DARTSAT, a student-run organization working to develop a cube satellite (2000 - 2003)
- NASA's Advanced Space Academy, Huntsville, AL (Dec 1997)
- NASA's Space Academy, Huntsville, AL, (Dec 1994)
- Developed an early warning system of hyperthermia for firefighters for a group engineering project (2001)
- Society of Automotive Engineers
- National Space Society
- Swim instructor
- Lifeguard

Hobbies and Interests

Reading and collecting comic books, swimming, playing tennis and racquetball, snorkeling, kayaking, rowing, traveling, genealogy, spending time with family and friends

"I have always had a deep passion for studying space and to be an astronaut. Hopefully, my time spent at the Goddard Space Flight Center this summer will help to narrow down my field of interest into something I can pursue as a career. In addition to my interest in space, I enjoy reading comic books, most aquatic sports, and learning about other cultures. I have spent time in Spain and studied in Puebla, Mexico for a term. Hopefully, I will be able to land a career where I am active in space exploration and make enough money to keep my comic addiction happy."



Sally House

The University of Arizona

Tucson, Arizona
Planetary Sciences
Doctor of Philosophy, May 2007

NASA Academy Research Project:

Cooling Large Telescopes and Instruments to 4K
Using Adiabatic Demagnetization Refrigerators
Principal Investigator: Dr. Mike DiPirro, Code 552



E-mail:

sally@lpl.arizona.edu

Present Address:

2532 E. Crosby Vista
Tucson, AZ 85713-2051

Permanent Address:

39 Edison Street
Warwick, RI 02889-1507

Academic Experience

- *The University of Arizona, Tucson, AZ, 2002 - Present*
- *Bachelor of Science in Physics, Worcester Polytechnic Institute, Worcester, MA, 2002*

Work Experience

- *The University of Arizona Department of Planetary Sciences, Research Assistant and Teaching Assistant - Tucson, AZ, 2002 - Present*
- *Tutor of High School Physics, 2002 - 2003*
- *The First Church of Christ, Scientist, On-Call Proofreader of the Christian Science Sentinel - Boston, MA, Apr 2002*
- *NASA Goddard Space Flight Center Cryogenics and Fluids Branch, Intern - Greenbelt, MD, 2001*
- *NASA Goddard Space Flight Center Solar Physics Branch, Intern - Greenbelt, MD, 2000 - 2001*
- *Worcester Polytechnic Institute George C. Gordon Library, Student Supervisor - Worcester, MA, 1999 - 2001*

Skills

- Computer Skills: Unix, Windows, Macintosh, Fortran, IDL, HTML, Microsoft Office, Maple, KaleidaGraph
- Other Skills: editing, proofreading

Honors

- National Science Foundation Graduate Research Fellowship Honorable Mention
- University of Arizona Graduate College Fellowship
- Graduation from Worcester Polytechnic Institute with High Distinction
- Membership in Sigma Pi Sigma, national physics honor society
- Membership in Tau Beta Pi, national engineering honor society
- Worcester Polytechnic Institute Deans' Scholarship

Activities

- Tau Beta Pi
- Sigma Pi Sigma
- Alpha Phi Omega
- Leadership Education and Practice
- Campus newspaper editorial board
- Drama club
- Society of Women Engineers
- Society of Physics Students
- Women in Technology mentoring
- Intramural soccer
- Project ASTRO

Hobbies and Interests

Climbing, caving, exploring, soccer, ice skating, theatre, piano, trumpet, writing, visual arts, space, birds, plants, politics, current events, collecting anthropomorphic suns, baking cookies (to share, of course!)

"To me NASA represents some of humanity's most noble pursuits: the striving to conquer our limitations, to touch the heavens, to understand the entire universe - all that exists. NASA makes these dreams come true. The opportunity to be part of NASA - even in just some small way - is definitely one of the best things ever to happen to me. I feel enormously honored and thrilled to be accepted into the Academy."



University of Kansas

Lawrence, Kansas
Engineering Physics, Aerospace Design Option
Bachelor of Science, May 2004



NASA Academy Research Project:

Solar Probe Project
Principal Investigator: Dr. Ed Sittler, Code 692

E-mail:

joonicorn@yahoo.com

Present Address:

1903 Massachusetts
Apt #11
Lawrence, KS 66046

Permanent Address:

8920 Cherry Creek
Wichita, KS 67207

Academic Experience

- *University of Kansas, Lawrence, KS, 2000 - Present*

Work Experience

- *University of Kansas Department of Physics and Astronomy, Research Assistant - Lawrence, KS, May 2002 - Present*
Worked as a Research Assistant with the Physics High Energy D0 group. Developed and performed tests for electrical components for Fermi National Laboratories D0 Run IIB particle detector. Helped set up and maintain a database to keep track of key components for the detector.
- *University of Kansas Natural History Museum, Assistant Teacher - Lawrence, KS, Jun 2001*
Assistant taught a class on basic aerodynamics principles for third and fourth graders and helped design projects to demonstrate these principles

Skills

- Computer Skills: AeroCad, Unigraphics, Fortran, Windows 9X, NT, Microsoft Office, Word Perfect

Honors

- Crimson and Blue Scholarship
- Whitiker Leadership Scholarship
- Engineering Dean's Scholarship
- Girl Scout Gold Award

Activities

- American Institute of Aeronautics and Astronautics
- American Astronautically Society, Treasurer
- Engineering Student Council
- Society of Women Engineers
- Society of Physics Students
- Tau Beta Pi Engineering Honors Society
- Sigma Pi Sigma Physics Honors Society
- Kansas Universities Technology Evaluation Satellite
- Engineering Ambassadors

Hobbies and Interests

Golf, softball, water-skiing, attending concerts, watching movies, camping

"I can not remember a time when math and science did not fascinate me. All my life I have dreamed of working in the space industry, specifically with NASA. I was told that I was aiming too high, that it was too competitive, that I would never get a job. I chose not to believe that. When I have a dream, I fight for it. I have known where I wanted to end up but, the path to get there was not as clear. In high school my interest in Physics and Math grew, and my love for space only increased. While examining colleges and majors during my junior in high school, I saw a degree program that seemed to fit me just right - Engineering Physics with and Aerospace design option. After spending almost three years in the program, I know I made the right choice"



Kelly Kolb

Villanova University

Villanova, Pennsylvania
Astronomy and Astrophysics
Bachelor of Science, May 2004



NASA Academy Research Project:

A Model for Near- Surface Groundwater on Mars
Principal Investigator: Dr. Herbert Frey; Code 921

E-mail:

Kelly.Kolb@Villanova.edu

Present Address:

348 East Hector Street
Conshohocken, PA 19428

Permanent Address:

182 Bywater Way
Hillsborough, NJ 08844

Academic Experience

- *Villanova University, Villanova, PA, 2000 - Present*

Work Experience

- *Villanova University Astronomy Department, Research Assistant - Villanova, PA, Jun 2002 - Present*
Researched symbiotic variable systems and HD152391, a peculiar star. Research, calculations, running models, compiling and graphing data, determining best fits
- *Villanova University Astronomy Department, Teaching Assistant for Astronomy Labs - Villanova, PA, Fall 2001, Fall 2002*
Assist in Stellar Lab, grade labs
- *Somerset Pool Company, Lifeguard, 1999 - 2001*
Lifeguard at a variety of township pools
- *Hillsborough Racquet and Fitness Club, Swim Instructor - Hillsborough, NJ, Summer 2000*
Lifeguard at a summer camp for children age 4-13, taught swimming lessons to a variety of levels
- *Abercrombie and Fitch, Brand Representative - Summer 2001*
- *Villanova University Astronomy Department, Office Assistant - Villanova, PA, Jan - May 2001*
Inventory, data input, odd jobs, copying, filing
- *Villanova University Astronomy Department, Observatory Assistant, Villanova, PA - Sep 2000 - May 2001*
Monitor the telescope and locate objects for visitors

Skills

- Computer Skills: C++, C, Linux, Unix, IRAF, IDL, Microsoft Office, Sigma Plot
- Other Skills: CCD Camera, Photometry, Spectroscopy

Honors

- Dean's List College of Arts and Sciences (2000 - 2001, 2001 - 2002)
- Father Jenkins Scholarship for Astronomy Majors at Villanova (2001 - 2002, 2002 - 2003)
- NASA Delaware Valley Space Grant Consortium Undergraduate Tuition Scholarship (2002 - 2003)
- Edwin Bailey Scholarship for Freshman Astronomy majors at Villanova (2001)
- Rainbow Division of the 42nd Company Scholarship (2000)
- Valedictorian Immaculata High School Class of 2000

Activities

- Poster Presentation at an American Astronomical Society meeting (May 2003)
- Presented at Philadelphia Area Astronomers' Meeting
- Villanova Dance Company
- Kappa Kappa Gamma
- Villanova Astronomical Society
- Phi Kappa Phi Honor Society
- Sigma Pi Sigma Physics Honor Society
- National Society of Collegiate Scholars
- Up 'til Dawn Team Leader

Hobbies and Interests

Dancing, choreographing dances, and spending time with my friends

"I'm the oldest of four kids and my family has moved around a lot. Without my family and friends, I wouldn't be where I am today - love you all! When I was little, I lived in Singapore for five years - quite the experience. Somewhere in my moving around I decided that I wanted to explore the Solar System and our Galaxy. After I graduate from Villanova, I really want to study the planets, especially Mars. I plan on attending graduate school for Planetary Science and getting a Ph.D. Hopefully my NASA Academy experience this summer will help me get ready for all that. I'm a dancer and I've been dancing competitively since seventh grade. I'm usually happiest while dancing or just hanging out with my friends. I'm looking forward to a great summer."



Concordia College

Moorhead, Minnesota
Physics, Mathematics
Bachelor of Arts, May 2003

NASA Academy Research Project:

An Interferometer for Low Uncertainty Vector
Metrology
Principal Investigator: Ronald Toland, Code 551



E-mail:

sckoterb@cord.edu

Present Address:

1601 8th St. S. Apt #7
Moorhead, MN 565

Permanent Address:

202 W. 6th Ave.
Westby, MT 59275

Academic Experience

- *Concordia College, Moorhead, MN, 1998 - Present*

Work Experience

- *Concordia College Physics Department, Research Assistant - Moorhead, MN, Sep 2002 - Jan 2003*
Studied the design and operation of a NASA-built Vandegraaff dust accelerator and utilized that knowledge to write a LabVIEW program to replace out-dated equipment and improve user control. Aided in research conducted by SRI International for Lawrence Livermore National Laboratory
- *Molecular Physics Lab, SRI International, Research Assistant - Menlo Park, CA, Jun - Aug 2002*
Using the Fortran computer language and IRAF software program, created software that aided in the reduction and analysis of emission spectra of Venus obtained by ground-based telescopes
- *Physics Department, Oklahoma State University, Research Assistant - Stillwater, OK, Jun - Jul 2001*
Assisted in collection and analysis of thermal conductivity measurements of air by utilizing the optical sensitivity of microspheres, which allowed the development of a mathematical model to describe changes in the optical properties of microspheres

Skills

- Computer Skills: Microsoft Word, Excel, PowerPoint, FrontPage, C++, Java, Fortran, AutoCAD, Mathematica, LabVIEW, IRAF
- Other Skills: SCUBA Certification

Honors

- Sigma Pi Sigma, National Physics Honor Society
- Minnesota Space Grant Consortium Scholarship
- Samuel G. Thvedt Memorial Scholarship
- Sigurd Mundhjed Memorial Scholarship
- Concordia Faculty Scholarship
- Cord Scholarship
- John W. McKee Scholarship

Activities

- Concordia College's Student Lecture Series, Lecturer
- Member of Society of Physics Students
- Member of Mathematics Society, Pi Mu Epsilon

Hobbies and Interests

Photography, snow skiing, hiking, basketball, football, softball, watching the Discovery channel, reading Popular Science magazines, discussing politics and religion with my friends, building with Legos, traveling (I have spent 5 over months abroad, visiting Egypt, China, Greece, Italy, Switzerland, France, the Netherlands, England, and Scotland)

"As a child, the wonders of space stretched my imagination to new limits. The more I learned, the more my imagination needed to expand. As I grew older, my interest in a career involving space intensified, but at the same time I was realizing my geographical limitations. I grew up in a small rural farming community in Montana (pop. 300), an hour away from the nearest fast food restaurant. Opportunities involving space were not available to me, and thus my interests were temporarily placed on hold. In recent years travel and research experiences have opened the world to me and I now realize that anything is possible. Along with this new realization, my childhood interest in space has surged back to the forefront of my interests and I am actively pursuing this interest, making up for lost time!"



Jeffrey Kujawa

University of Vermont

Burlington, Vermont
Mechanical Engineering
Doctor of Philosophy, May 2007



NASA Academy Research Project:

Monopropellant Supersonic Microthrusters
Principal Investigator: Chuck Zakrzewski, Code 597

E-mail:

jkujawa@emba.uvm.edu

Present Address:

435 Dorset St.
Apt #23
S. Burlington, VT 05403

Permanent Address:

1244 Blakeley Rd.
E. Aurora, NY 14052

Academic Experience

- *University of Vermont, Burlington, VT, 2002 - Present*
- *Bachelor of Science in Physics, State University of New York at Geneseo, Geneseo, NY, 1998 - 2002*

Work Experience

- *Goulds Pumps/ITT Industries, Assistant Product Engineer - Seneca Falls, NY, Aug 2001 - Aug 2002*
Produced intricate schematics using Pro-Engineer. Redesigned a check valve and magnetic switch. Completed a detailed study of competitor pumps.
- *Rensselaer Polytechnic Institute, Research Assistant - Troy, NY, Summer 2001*
Summer Research Experience for Undergraduates studying Terahertz time-domain Spectroscopy. Miniaturized silicon devices produced using a photolithographic process in a "Class 100" clean room.
- *State University of New York at Geneseo, Research Assistant - Geneseo, NY, Summer 2000*
Designed a PIN diode detector to study particles produced from a fusion reaction. Visited and tested the devices at the Laboratory for Laser Energetics in Rochester, NY.

Skills

- Computer Skills: LabVIEW, Fluent 6.0 and Gambit 2.0, Pro-Engineer, Micrografix Designer, Excel, Origin, and Pspice, Matlab, Mathcad

Honors

- SUNY Geneseo Dean's list (8 semesters)
- Member of Sigma Pi Sigma, Physics Honor Society
- Member of Phi Eta Sigma, National Honor Society
- Physics Senior Award (Spring 2002)
- Graduate Student of the Year Award, The University of Vermont (Spring 2003)

Activities

- Academic Affairs Committee
- Physics Club
- ASME
- A variety of outreach ranging from UVM sponsored programs to local schools and organizations such as the Vermont Refugee Resettlement Program.

Hobbies and Interests

Competitive mountain biking, model rockets, hunting/fishing-design and produce my own flies for fly fishing, and arrows for archery

"Growing up in a small suburb of Buffalo, NY, I have always enjoyed anything that leads me outdoors. Although I have always been interested in science, I became involved in the aerospace side of things when I began building model rockets for fun. These endeavors provided me with the drive to pursue a Bachelor of Science degree with concentrations in physics and math from the State University of New York at Geneseo. Developing a strong love for engineering and fluids, I am currently working towards a Master's followed by a Ph.D. in Mechanical Engineering at The University of Vermont. Although I am not exactly sure what I want to do upon graduation, I am positive it will allow me to further explore my engineering dreams. In the meantime, I plan to do as much fishing and hunting as my studies will allow."



Virginia Polytechnic Institute and State University

Blacksburg, Virginia
Aerospace Engineering
Bachelor of Science, May 2004



NASA Academy Research Project:

Ariane Launch Window for Orbit Insertion of James Webb Space Telescope
Principal Investigator: Mark Beckman, Code 595

E-mail:

klangone@vt.edu

Present Address:

504 Sunridge Dr
Apt 304
Blacksburg, VA 24060

Permanent Address:

145 Emerald Dr
Athens, GA 30605

Academic Experience

- *Virginia Polytechnic Institute and State University - Blacksburg, VI, 2000 - Present*

Work Experience

- *Virginia Tech Student Assistance Center, Engineering Tutor - Blacksburg, VI, Aug 2002 - Present*

Skills

- Computer Skills: Windows, Macintosh, Matlab, C++, Microsoft Office, Mechanical Desktop, Satellite Tool Kit (Astrogator)

Honors

- Dean's List each semester at Virginia Tech
- Lucille-Seay Scholarship (2001 - 2003)
- Norris Mitchell Memorial Scholarship (2001 - 2002)
- Marshall Hahn Scholarship (2000 - 2001)
- Class of 2000 Salutatorian (2000)
- National Merit Scholarship Finalist

Activities

- Virginia Tech Design, Build, and Fly Team, Project Chief Engineer (2002)
- American Institute of Aeronautics and Astronautics, Student Member

- HokieSAT Satellite Construction Team (2002)
- Phi Kappa Phi (2002)
- National Society of Collegiate Scholars (2001 - Present)
- Golden Key International Honor Society (2001 - Present)
- National Society of Professional Engineers Student Member (2001 - Present)

Hobbies and Interests

Watching football and basketball, playing pretty much any sport, weight lifting, the occasional video game

"Well, I've always liked space and technology ... probably explains why I'm here. I'm sure you could've guessed that anyway though, so I'll try to let you know a little bit about the rest of me. I grew up an only child and spent my entire time until college in Athens, Georgia, home of UGA. Thus, I've always been a huge football fan (VT Hokies national champs in 2003!). I like most sports really, including baseball, basketball (Arizona screwed my bracket this year), golf, and recently bowling. I also enjoy getting in the gym when I have time. I like to attend the occasional party, read the occasional book, or play the occasional video game (not at the same time, obviously) as well. As far as music, don't give me anything but rock: Led Zeppelin and Pearl Jam are a couple of my favorites. I'll eat just about anything, as long as it doesn't have mayonnaise in it. Hopefully that gives you a little insight into me (at least as much as a few sentences can)."



Florida Institute of Technology

Melbourne, Florida

Space Sciences

Bachelor of Science, May 2004



NASA Academy Research Project:

Single Electron Transistors as Multiplexers for Large

Format Semiconducting Bolometer Arrays

Principal Investigator: Harvey Moseley, Code 685

E-mail:

cpelzer@fit.edu

Present Address:

3184 Nancy St.
Melbourne, FL 32904

Permanent Address:

12840 Wembly Rd
Brookfield, WI 53005

Academic Experience

- *Florida Institute of Technology, Melbourne, FL, 2000 - Present*

Work Experience

- *Astronautics Corporation, Engineering Internship - Milwaukee, WI, 2001*
Internship with analogue design department for the production of Liquid Crystal Display Assemblies for aircrafts. Drafted Engineering Change Orders, Procurement Specifications, and Acceptance Test Procedure for Display Head Assembly
- *Jet Propulsion Laboratory, NASA Undergraduate Student Research Project - Pasadena, CA, Summer 2002*
Quantified and corrected flexure in the Palomar Adaptive Optics System. Collected data through operation of Adaptive Optics System and Science Camera with the 5 meter telescope at Hale Observatory. Produced data charts for astronomers use to correct for flexure error.
- *Geospace Physics Laboratory, Florida Institute of Technology, Laboratory Assistant - Melbourne, FL, 2002 - Present*
Programmed subroutines for numerical modeling of Cosmic Rays.
- *GAS 173 Project, Florida Institute of Technology - Melbourne, FL, Jan 2001 - Present*
Working to detect Sprites in upper atmosphere of Earth as a member of the Optical ROUGE (Radio Optical Gamma Ray Undergraduate Experiment), expected to fly aboard shuttle in 2005. Experiment head for Electro Deposition experiment investigating effects of zero gravity on the electrochemical deposition of copper-indium diselenide polycrystalline thin films.

Skills

- Computer Skills: UNIX, IDL, FORTRAN, Perl

Honors

- Outstanding Freshman Award, Florida Tech (2001)
- Living the Ritual Award, Greek Awards Night (2002)
- Order of Omega, Greek Honors Society, Vice President (2003)
- Florida Tech Greek Woman of the Year (2002 - 2003)

Activities

- Alpha Phi Fraternity, Vice President of Marketing and Recruitment
- Sigma Pi Sigma, Member
- Florida Tech Astronomical Society, Treasurer
- Students for the Exploration and Development of Space, President
- Cheerleading Squad, Varsity Athlete (2000 - 2003)
- College Players
- Intramural Football and Softball
- Players in Harmony (Florida Tech Choir)

Hobbies and Interests

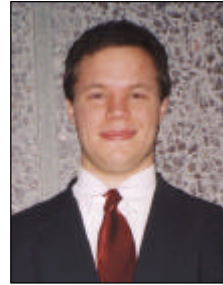
Hiking, camping, kayaking, stamp collecting, singing, dancing, learning to play the guitar, intramural flag football, water polo, ultimate frisbee

"Since I was a little girl, I have been interested in space exploration. I hope my career will be within NASA, as I truly see the importance of this organization. Although I originally only dreamed of space, I am fascinated by all sciences. I find myself truly curious of the world surrounding us and cannot wait to discover the research happening at Goddard. I feel as though I finally have the opportunities to begin to explore our world and cannot wait to dive in head first!"



Harvard University

Cambridge, Massachusetts
Physics and Astronomy & Astrophysics
Bachelor of Arts, June 2004



NASA Academy Research Project:

Cassini Plasma Spectrometer (CAPS) Ion Mass Spectrometer (IMS) and the Search for Interstellar Ions

Principal Investigator: Dr. Ed Sittler, Code 692

E-mail:

ragozzin@fas.harvard.edu

Present Address:

436 Quincy Mail Center
Cambridge, MA 02138

Permanent Address:

660 West 110 North
Hurricane, UT 84737

Academic Experience

- *Harvard University, Cambridge MA, 1999 - 2000, 2002 - Present*
- *Stanford University Educational Program for Gifted Youth, 1996-1999: College level mathematics courses via computer*

Work Experience

- *Harvard-Smithsonian Center for Astrophysics - Cambridge, MA, Spring 2003*
Research project in extrasolar planet orbit determination. Programming a non-linear minimization algorithm.
- *Harvard Extension School - Cambridge MA, 2002 - 2003*
Teaching Fellow for Physics E-1; Teaching, Leading Labs, etc.
- *Church of Jesus Christ of Latter-day Saints - Kiev, Ukraine, Aug 2000 - Jul 2002*
Ecclesiastic Missionary for the Church of Jesus Christ of Latter-day Saints in Ukraine; served in various leadership positions
- *Caltech, Summer Undergraduate Research Fellowship - Pasadena, CA, Summer 2000*
Researched Mission Design for a Commercial Lunar Mission to the Lunar South Pole; Worked with professional engineers and scientists.
- *Harvard-Smithsonian Center for Astrophysics, Research Assistant - Cambridge, MA, 1999 - 2000*
Assisted in programming a noise removal algorithm for ESA's Planck satellite. Mathematical and graphics-based subroutines.

Skills

- Computer Skills: PC hardware and Windows software (Office), UNIX, C, Fortran, HTML, MATLAB
- Language Skills: Fluent Russian and conversational Ukrainian; simultaneous two-way oral translation

Honors

- Ranked in the top 200 in the nation several times in various Mathematics contests beginning in Middle School (1993) through graduation.
- State Champion in Math, Forensics, Academic Decathlon, etc.
- Perfect scores: SAT and ACT Math, 8 AP Exams, etc.
- Sterling Scholar - Outstanding Student in Mathematics
- Elk's Most Valuable Student Scholarship
- Robert C. Byrd Honors Scholarship
- Harvard Alumni Association of Utah Outstanding Student Award
- John Harvard Scholarship (Dean's List)

Activities

- SEDS, Treasurer (2002 - 2003), President (2003 - 2004)
- Mars Society at Caltech
- Harvard Intercollegiate Model United Nations Team
- Latter-day Saint Student Association, Treasurer (2003 - 2004)

Hobbies and Interests

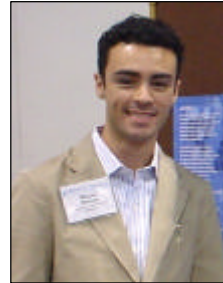
Active participation in church activities, spending time with family and friends, reading science fiction in English and Russian, staying current on scientific discoveries, especially involving space

"Many in my small hometown have wondered why I want to be a 'rocket scientist.' I tell them to consider the role that space-related technology, resources, industry, or travel could have in the not-too-distant future. Since I have made it my goal to significantly contribute to the progress of mankind, and given my aptitude for math and science, a career in astrophysics has always been a natural decision. Perhaps, more philosophically, I also enjoy learning and discovering truth, wherever it may be found. Like many, I am also captivated by the opportunities that space has to offer us, individually and collectively."



University of Puerto Rico at Mayagüez

Mayagüez, Puerto Rico
Electrical Engineering
Bachelor of Science, May 2004



NASA Academy Research Project:

Modeling Urban Land-Atmosphere Interactions
Principal Investigator: Christa Peters-Lidard, Code 974
Co-Investigator: Dr. Menglin Jin, U. of Maryland

E-mail:

romanm@ieee.org

Present Address:

P.O. Box 5437
Mayagüez, PR 00681

Permanent Address:

L-13 Jaguas St.
Guaynabo, PR 00969

Academic Experience

- *University of Puerto Rico at Mayagüez, Mayagüez, PR, 1998 - Present*

Work Experience

- ***NASA Partnership for Spatial and Computational Research: Remote Sensing and Geographic Information Systems Research - Mayagüez, PR, May 2000 - Dec 2002***
Analyzed geometric coverages and satellite imagery of the Puerto Rican Archipelago. Created a high-scale Geographic Information System for natural hazards exposure. Developed photo-interpretation tools for regional Land Use coverages that examined the expansion of industrial developments in Puerto Rico.
- ***IBM Corporation Research Division: Research in Optical Servo Controller Applications - Poughkeepsie, NY, Jan - Aug 2002***
Designed and completed a universal parameter definition approach for embedded optical locking modules, which adapted to optoelectronic drives and tunable lasers used in high-speed networks.
- ***United States Geological Survey Mapping and Technology Division Engineering: Geographic Information Systems Integration - Reston, VA, May - Dec 2001***
Designed, coded, and tested geo-coding scripts that successfully improved real-time natural resources information visualization and data acquisition. Created an object oriented Internet mapping server with the ability to outline the quick emergence of earthquake hazards around any given geographic scenery.

Skills

- Computer Skills: AutoCAD, Matlab, Cadence PSpice and Allegro, LogicWorks, ERDAS, ArcGIS, XML, Microsoft Office, Lotus Notes, HTML, PowerWorld, PowerTools
- Language Skills: Fully bilingual (Spanish/English), both written and oral

Honors

- US Department of the Interior STAR Award (2002)
- NASA-PaSCoR Distinguished Research Associate (2002)
- IBM Corporation Ambassador: SVMP - Harvard Business School
- First Prize at the NASA-PAIR Summit Research Competition (2002)
- Honorable Mention at the AAAS International Research Competition (2003)

Activities

- IEEE active member (1998 - present)
- AIAA (2000 - present)
- Tau Beta Pi - PR Alpha Chapter (2002 - present)
- Golden Key, Directive Officer (2000 - present)
- SHPE (1998 - present)
- NSS (2001 - present)
- AAAS (2002 - present)

Hobbies and Interests

Hiking, scuba diving, cooking, reading, modern history

"When Hurricane Georges passed over Puerto Rico in 1998, I was just a 16-year-old young man who had recently graduated from high school. After the event, nearly the entire island's infrastructure had been affected, and there were no energy and water resources available for almost two months. It was from that memorable event that I realized why on Earth engineers exist, and why I was going to strive in my life to take on such an essential role in society. Ever since I became a research assistant at the NASA-PaSCoR program, I have formed an endeavor in favor of novel engineering techniques that will provide crucial answers to emergency and investigation agencies when facing the uncontrollable occurrences of a natural hazard. In the near future, I hope to become a scientific leader and vanquisher of even more complex uprisings by joining the Graduate Academia and contributing to the advancement of Science."



University of Illinois Urbana/Champaign

Urbana/Champaign, Illinois
Aeronautical and Astronautical Engineering
Bachelor of Science, May 2004



NASA Academy Research Project:

JWST Microshutters
Principal Investigator: George Voellmer, Code 543

E-mail:

rzeszutk@uiuc.edu

Present Address:

1010 W. Clark St.
Apt. #17
Urbana, IL 61801

Permanent Address:

8 E. Berkshire Ln.
Mt. Prospect, IL 60056

Academic Experience

- *University of Illinois Urbana/Champaign, Champaign, IL, 2000 - Present*

Work Experience

- *Self-Healing Polymer Research Group: Undergraduate Research Assistant (Material Science) - Oct 2001 - Present*

Working directly with Motorola to integrate self-healing polymers into manufacturing; Dielectric testing of thin epoxy samples for application in circuit boards; Performing uniaxial tensile tests to investigate recovery of stiffness properties; Making polymer composite samples and molds; Presented at two undergraduate research competitions; Responsible for choosing all of the experimental parameters for each research project, from testing equipment to sample fabrication. <http://www.autonomic.uiuc.edu/>

- *Northrop Grumman Corporation-Electronic Sensors and Systems Sector: Advanced Targeting Pod, Summer Intern - Rolling Meadows, IL, Jun - Aug 2001*

Laser Research on reflectivity and absorption; Contacted laser experts nation/worldwide; Extensive use of MS Excel 2000; Reviewed, summarized, and organized hundreds of documents; Created comparison documents of Military Standards; Researched relevant electronics; In depth understanding of engineering and military contractors.

- ***Float'n Illini (competitive micro-gravity research team selected by NASA), Aug 2000 - Aug 2001***
 Raised nearly \$30,000 to fund our fluid dynamics research project;
 Wrote and edited parts of the proposal and final report sent to NASA;
 Designed, manufactured, and tested prototype; Administrative tasks;
 Educational outreach and Publicity events.
<http://www.aae.uiuc.edu/floatn/>

Skills

- Computer Skills: MATLAB, C, MS Word, MS Excel 2000, MS PowerPoint, KaleidaGraph
- Other Skills: Atomic force microscope, profilometer, metal evaporator, dielectric testing equipment, AMTEL loading frame, chemical etching, precision saw
- Personal Skills: Highly motivated, quality performance, time efficient, cooperates well with many people, loves teamwork; however works well independently

Honors

- Boeing Scholarship
- Anne Suratt Memorial Scholarship
- Dean's List
- Lockheed Martin Scholarship
- Full Scholarship through the Freeman Foundation to Study Abroad - Shanghai, China
- Honeywell Scholarship

Activities

- Women in Engineering (WIE)
- Society of Women Engineers (SWE), Publicity team
- Illinois Space Development Society, Executive Board

Hobbies and Interests

Intramural softball, swing dancing, playing the viola, orchestra, running, watching movies, and sleeping if there is a spare moment

"Like Lewis and Clark, I want to explore the uncertainties, the dangers, and the beauties that exist beyond this world's realm of knowledge. I want my footsteps to lead the future, to leave a mark on our society, and to open new doors for potential explorations and settlements. I want to view our planet from a perspective only few have had the opportunity to observe, and I intend to persevere to reach these goals."



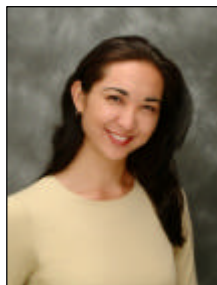
Julia Sakamoto

University of Hawaii at Manoa

Honolulu, Hawaii

Physics

Bachelor of Science, May 2003



NASA Academy Research Project:

Cryogenic Polarization Chopper for

Millimeter and Sub-Millimeter Waves

Principal Investigator: Jay Chervenak, Code 553

Co-Investigator: Dominic Benford, Code 685

E-mail:

juliasakamoto@hotmail.com

Present Address:

94-1030 Kukula Street
Waipahu, HI 96797-5268

Permanent Address:

94-1030 Kukula Street
Waipahu, HI 96797-5268

Academic Experience

- *University of Hawaii at Manoa, Manoa, HI, 1998 - Present*

Work Experience

- *University of Hawaii, Physics Department - Manoa, HI, 2001 - present*
Grader/Tutor for introductory-level physics courses

Skills

- Computer Skills: UNIX, Microsoft Works, Microsoft Office (Word, Excel), HTML, SM, Derive, C

Honors

- Dean's List (10 semesters)
- tuition waivers for academic excellence

Activities

- Society of Physics Students (President)
- Golden Key International Honor Society
- American Lung Association of Hawaii Volunteer

Hobbies and Interests

Outdoor activities (one of the reasons why living in Hawaii is so wonderful), horseback riding, camping on the beach, hiking, fishing (my favorite), throwing darts, drawing, motorcycles

"I was just a young child when I first discovered my passion for learning. I always loved being in school, and even as a little girl, I preferred office supplies rather than toys as birthday and Christmas presents. Meanwhile, I recognized my natural aptitude for mathematics and deep interest in science, which is when the thought of working for NASA originated. As my knowledge continued to evolve in math and physical science, I realized more and more that what was once a part of my imagination could ultimately become a reality. So I made it a goal in life to have a career in the space program and this has been a huge driving force in my effort to succeed scholastically."



Pittsburg State University

Pittsburg, Kansas
Engineering Technology
Master of Engineering Technology, May 2003

NASA Academy Research Project:

Multi-tuned Active/Passive Antenna Element
Characterization

Principal Investigator: Larry Hilliard, Code 555
Co-Investigator: Ross Henry, Code 551



E-mail:

[david.a.thompson@
lycos.com](mailto:david.a.thompson@lycos.com)

Present Address:

510 E Washington
Pittsburg, KS 66762

Permanent Address:

509 F NE
Miami, OK 74354

Academic Experience

- *Pittsburg State University, Pittsburg, KS, 1997 - Present*
- *Bachelor of Science in Electronics Engineering Technology, Pittsburg State University, Pittsburg, KS, Dec 2001*
- *Associate of Applied Science in Electrical Technology, Northeastern Oklahoma A&M, Miami, OK, May 1999*

Work Experience

- *TEC Engineering, Engineer - Wichita, KS, May 2002 - Present*
Aided in design, rollout, and support of remote shipping system. Created software for the transfer of data between CSV files and SQL Server database. Integrated proximity card readers into control architecture
- *Boeing, Avionics Engineer - Wichita, KS, May - Aug 2001*
Aided in design modification of 757 aircraft for use as freight carriers, Designed test for newly redesigned flight data recorder

Skills

- Computer Skills: MultiSim, Visual Basic, C++, CScape, RSLogix, AutoCad R14 & 2000, SQL, Office 2000 & XP, Excel, PowerPoint
- Other Skills: Analog & digital circuit design, microcontroller programming and implementation, basic PLC programming, basic network layout and maintenance

Honors

- McNally Gould Scholar
- Undergraduate Summa Cum Laude
- NASA Space Grant Fellowship
- Excellence in Research Award
- Excellence of Professional Service Award

Activities

- IEEE student chapter chairperson

Hobbies and Interests

Hiking, camping, rappelling, riding motorcycles, playing guitar, writing

"I love meeting new people, and learning new things, and enjoy being placed into new situations which force me to learn new skills and improve the skills I have. I believe that continual learning is a necessity as well as a means of remaining dynamic in all areas of life. I love all that NASA and the space program have to offer the society as a whole, and look forward to the challenges it has to present to each of us at the Academy."



The NASA Goddard Academy is administered and operated within the GSFC University Programs Office.

Program Director

Dr. Vigdor L. Teplitz, Chief, University Programs

Dr. Teplitz directs the University Programs Office and provides vision, inspiration, and leadership for the Academy and other programs offered by the Office. He joined Goddard at the beginning of 2003 on a three-year leave of absence from the Physics Department of Southern Methodist University. His previous experience includes academic appointments at MIT and Virginia Tech, as well as twelve years in the U.S. Arms Control and Disarmament Agency and two years in the White House Science Office. His research is in elementary particle theory, primarily at its border with astrophysics and cosmology.

Program Co-Director

Dr. Richard P. Fahey

Dr. Fahey has served as Director and Co-Director of the NASA Academy since its foundation. He took over the leadership of the University Programs Office as Acting Director after Jerry Soffen's death. For the past three decades, he has been developing methods of presenting relativity and quantum theory to non-specialist audiences. During that time, he has taught courses in physics, astronomy, relativity and cosmology, and the philosophy of nature. Dr. Fahey currently conducts research as a cosmologist at GSFC and also holds the Naval Space Command Research Chair at the U.S. Naval Academy in Annapolis.

Program Co-Director

Dr. Richard C. Henry

Dr. Henry is Professor of Physics and Astronomy at The Johns Hopkins University in Baltimore, Maryland, and Director of the Maryland Space Grant Consortium. From 1976 to 1978, he was Deputy Director of the Astrophysics Division at the NASA Headquarters. He is an expert in the astrophysics of diffuse background radiation, particularly the diffuse background in the ultraviolet part of the electromagnetic spectrum. He has served as Co-Director of the Academy since his appointment to that role by the late Jerry Soffen, founder of the Academy. He has been a regular lecturer at the Academy, presenting the foundations of quantum mechanics and other aspects of physics and astrophysics. Dr. Henry is a staunch supporter of the Academy program, its participants, and alumni.

Program Manager

Mr. David Rosage

Mr. Rosage has earned two Master's Degrees (Mechanical Engineering and Program Management) from The Johns Hopkins University and has served NASA for the past 23 years and the Academy Program since 2000. Besides managing the day-to-day activities of the Academy, he oversees the Academy application and selection process, promotes the Academy, sets milestones, performs scheduling duties, performs budgeting duties, oversees program staffing and contract utilization, and increases the involvement of and opportunities for the NASA Academy Alumni Association (NAAA). Additionally, he provides advice and assistance to NASA project scientists, engineers, and officials on a wide range of Academy-related matters.

Dean of Academic Affairs

Dr. Irina Nelson

Dr. Nelson, a physicist with a long-time record in education and research (high energy physics, solid state physics, and materials science and engineering), is currently appointed Special Assistant for Research and Outreach in the Goddard Office of University Programs. As Dean of the NASA Academy, she is involved in the development of the Academy curriculum and its general academic program, and contributes to the strategic vision for NASA Academy. She is responsible for providing academic counseling to the Academy participants on their individual research work, the group project, and consults with their research supervisors. She provides advice to the Program Director, Co-Directors, and Program Manager on the individual participants' performance. Dr. Nelson is also a visiting lecturer at the International Space University (ISU).

Logistics Manager

Mr. Paul Gosling

Paul is an alumnus of the 2002 NASA Goddard Academy. He just graduated with a Bachelor's degree in Physics from The Johns Hopkins University. This spring, Paul led a senior undergraduate team conducting a micro-gravity research project on the KC-135 plane at the NASA Johnson Space Center.

Operations Manager

Ms. Sara Jean MacLellan

Sara is an alumna of the 2002 NASA Goddard Academy. She just graduated, Summa Cum Laude, with a Bachelor of Science Degree in Aerospace Engineering from the Embry-Riddle Aeronautical University in Prescott, Arizona. Besides being an excellent student, Sara is also an experienced private pilot and motivated volunteer. In the Fall of 2003, she will begin graduate studies at the Massachusetts Institute of Technology with an Emphasis in Information and Navigation Systems.

Program Support

Ms. Julielynn Wong

Julielynn is an alumna of the International Space University (ISU). She is currently completing an M.D. degree at Queen's University in Ontario, Canada. She has worked at the Ontario Science Center as a Science Educator and Program Leader, where she has created and given numerous educational presentations and planetarium programs on various space science and astronomy topics to over 15,000 members of the public. Last summer, at ISU, she was part of an international and multidisciplinary design project team that focused on the development and promotion of a global strategy to help combat malaria using satellite technologies.

Program and IT Support

Mr. Johnny Erickson

Johnny has a Bachelor's degree in Computer Science and is the co-founder of a software design company. A pillar of the 2002 Goddard Academy, Johnny is an enthusiastic and devoted supporter of the Academy and its Alumni Association.

In the operation of the NASA Academy, Paul, Sara, Julielynn, and Johnny will provide general assistance and logistics coordination. They will reside full time at the Academy House and will be available as facilitators in all the relevant program activities.

Academy Alumni Coordinator

Ms. Laura Burns

Ms. Burns is an alumna of the 1996 Academy at the Marshall Space Flight Center and an active member of the NAAA. She currently works at GSFC supporting the James Webb Space Telescope (JWST). As the Alumni Coordinator, Laura informs, recruits, and coordinates alumni participation in all Academy extracurricular activities.

Special Assistants for Operations

Mrs. Mary Floyd, Westover Consulting

Mrs. Floyd provides support for housing, meals, transportation, and lodging on field trips, and distribution of the Academy participants' financial reimbursements.



Links

- NASA Academy:
<http://www.nasa-academy.nasa.gov/>
- NASA Academy Alumni Association:
<http://www.nasa-academy.org/>
- NASA Agency:
<http://www.nasa.gov>
- International Space University:
<http://www.isunet.edu>
- The Soffen Memorial Fund:
<http://www.nasa-academy.org/soffen/donors.html>
- Goddard Space Flight Center:
<http://www.gsfc.nasa.gov/>
- Goddard Space Flight Center's Mission:
http://www.gsfc.nasa.gov/about_mission.html

